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AMERICAN CITY & COUNTY

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Survey: Data Processing Use Is Multiplying

Innovative Approaches To Water Treatment

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About the Cover

Mechanistic cloning? No, this room of modern data processing machines reflects the growing importance of such business equipment. AC&C's data processing survey appears on page 42. (Our thanks to Rod Ratcliffe for both this and last month's cover and inside photos.)

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Data Processing Survey Shows Use Is Multiplying

Of the 83 percent of respondents who said they use data processing, most indicate their systems are in-house and budgets are increasing.

As public pressure mounts for more reliable and cost-effective methods of operation, local governments are increasing their use of data processing. As a result, data processing budgets are also experiencing steady increases as more uses for the equipment are found. In particular, in-house systems are increasingly in vogue as public officials and employees become more comfortable with the advanced technology.

These are some of the conclusions made based on the results of a national survey on data processing use, conducted recently by AMERICAN CITY & COUNTY. A total of 3,000 questionnaires were mailed to city clerks and other public employees involved with data processing at the local government level. The response rate was nearly 25 percent, with 743 responses returned.

Every section of the United States is represented in the final results, with the largest number of responses coming from the North Central region (31 percent) and the fewest from the South Atlantic area (11.6 percent). Both townships and municipalities are well represented, with the bulk of the responses (81 percent) originating from areas with populations between 10,000 and 49,999. Communities in the 50,000 to 249,999 population range make up 18 percent of the responses; and larger cities, with populations over 250,000, represent the final 1 percent.

The three-page survey asked questions such as: Do you utilize data processing in any department? What was your approximate data processing budget in 1982? Do you have an in-house computer system? Who is the primary manufacturer? In which year was it installed? For what functions do you use data processing?

While the survey results are not scientific, they do indicate certain trends, as well as demonstrate the wide range of functions for which data processing is currently being used. For instance, the results clearly show that smaller townships rely less on data processing than do larger cities. In fact, when asked if data processing was used, 63 percent of the townships said yes, as opposed to 88 percent of the municipalities. Overall, 83.4 percent of the 743 respondents said they used data processing.

In-house systems are used by 82 percent of the survey respondents who said they utilized data processing.

According to the survey, data processing budgets run the gamut, from under $20,000 annually to over $500,000 per year. Most respondents (47.7 percent) indicated their budgets were under $100,000 in 1982. More than 9 percent said they spent over $500,000 on data processing last year.

The figures show that population size has a direct bearing on data processing budgets. While, overall, 13.5 percent of total respondents said they spent less than $20,000, 33 percent of the townships had budgets that low, and over 25 percent of the municipalities had budgets over $200,000.

Approximately half of all respondents said that their data processing budgets increased in both 1982 and 1983. Most increases were in the 1-10 percent range in both years (27 percent in 1982 and 29 percent in 1983), while a

significant portion (10 percent and 8 percent, respectively) experienced budget jumps of 11 percent to 20 percent.

Another significant trend indicated by the survey is that larger communities are more likely to keep their data processing operations in-house rather than seek the services of an outside source. A high percentage of the respondents who said they used data processing (82 percent) said their systems were in-house, with a higher figure for municipalities (84 percent) than for townships (67 percent). Also, cities and towns with lower data processing budgets are less likely to have in-house systems.

IBM is by far the most widely used data processing equipment of those who answered the survey. Over 33 percent said they had IBM equipment, with cities over 250,000 population even more likely to opt for the corporate giant (50 percent). Burroughs was the second choice of suppliers with nearly 17 percent. NCR was third at over 13 percent and is very popular with communities in the 10,000 to 24,999 population range. Other suppliers mentioned prominently were Data General, Digital Equipment Corporation, Hewlett-Packard, Honeywell, Sperry-Univac and Wang.

A majority of the respondents who said they use in-house data processing said they installed their equipment from 1980 to 1982 (57 percent), with 1981 the busiest year at 22 percent.

The popularity of data processing can be directly related to the versatility of the equipment, judging by the survey, with a wide range of functions available to local governments. Accounting jobs, performed by data processing, were by far the most often mentioned. However, assessments, budgeting and management, voter registration, public safety, treasury/collection, purchasing/inventory, utilities, planning and zoning, and sanitation also registered significant responses.

Even such topics as animal licenses, bike registration, disease control, drug abuse, and a variety of education-related uses were mentioned as areas where data processing is used.

With this versatility tied to the time and cost-saving qualities inherent with today's data processing systems, it should not be surprising that so many local governments of all sizes increasingly utilize data processing. Eventually, more jobs will be put on the systems in the future, perhaps relieving some of the public pressure for more efficient and cost-effective local government operations. □

By Ken Anderberg

Data Processing Survey

Do you utilize data processing? *

	Total	Townships	Municipalities	Population Size: 10,000-49,000	50,000-249,999	250,000 and above
Yes (%)	83.4	63.4	87.8	80.2	97.0	100.0
No (%)	16.3	35.1	12.2	19.5	3.0	0
In-house?**						
Yes (%)	81.6	67.1	83.9	78.6	91.5	100.0
No (%)	17.6	32.9	15.1	20.4	8.5	0
Do you plan to use data processing in 1983?*						
Yes (%)	81.6	64.9	85.2	78.8	94.0	80.0
No (%)	10.9	23.9	8.0	13.2	1.5	0

* Based on 743 responses, including: 134 townships and 609 municipalities.
** Based on those responding who utilize data processing, including: 620 total, 85 townships, and 535 municipalities.

1982 Data Processing Budget *

	Total	Townships	Municipalities	Population Size: 10,000-49,999	50,000-249,999	250,000 and above
$50,000 or less	29.5%	55.3%	25.4%	36.6%	4.7%	10.0%
$51,000-200,000	30.8	21.2	32.3	32.8	25.6	0
$201,000-400,000	11.0	2.4	12.3	7.5	24.0	10.0
$401,000 and above	11.9	4.7	13.1	3.1	40.3	70.0
No answer	16.8	16.5	16.8	20.0	5.4	10.0

Comparison of 1983 Budget With 1982 *

Total higher	47.7%	40.0%	49.0%	23.5%	58.9%	70.0%
No change	21.1	20.0	21.3	21.6	20.2	10.0
Total lower	11.1	17.6	10.1	10.8	11.6	20.0

* Based on 620 respondents who utilize data processing.

Primary Manufacturer

(Of respondents with in-house computers)

	Total	Townships	Municipalities	Population Size: 10,000-49,999	50,000-249,999	250,000 and above
IBM	33.4%	15.8%	35.6%	33.6%	31.4%	50.0%
Burroughs	16.6	21.1	16.0	15.9	19.5	10.0
NCR	13.4	14.0	13.4	14.3	11.9	0
Hewlett-Packard	5.9	0	6.7	6.1	5.9	0
Data General	5.1	14.0	4.0	6.1	2.5	0
Digital	4.7	7.0	4.5	3.7	8.5	0
Sperry-Univac	4.5	1.8	4.9	4.0	5.9	10.0
Wang	3.6	3.5	3.6	4.0	2.5	0
Honeywell	2.6	1.8	2.7	1.0	5.9	20.0
Other	8.7	17.5	7.6	10.1	5.1	0

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Functions for Which In-House Data Processing Is Used

	Total	Townships	Municipalities	Population Size 10,000-49,999	50,000-249,999	250,000 and above
Accounting						
General accounting	90.9%	82.5%	92.0%	91.0%	90.7%	90.0%
Check preparation	89.9	82.5	90.9	89.7	90.7	90.0
Payroll	91.7	87.7	92.2	92.1	91.5	80.0
Retirement/Pension	51.4	50.9	51.4	45.5	69.5	60.0
General ledger	85.8	73.7	87.3	85.7	86.4	80.0
Financial statements	70.4	54.4	72.4	72.8	64.4	50.0
Revenue ledger	83.6	64.9	86.0	82.5	87.3	80.0
Expenditure ledger	85.0	71.9	86.6	84.4	87.3	80.0
Assessment						
Real property records	36.8%	43.9%	35.9%	35.2%	41.5%	40.0%
Personal property	26.1	35.1	24.9	25.9	27.1	20.0
Listing of all property	37.2	49.1	35.6	35.7	41.5	40.0
Budgeting & Management						
Expenditure forecasts	41.5%	33.3%	42.5%	39.2%	49.2%	40.0%
Revenue forecasts	38.3	29.8	39.4	37.0	42.4	40.0
Budget preparation	72.3	54.4	74.6	69.6	81.4	70.0
Budget monitoring	73.9	63.2	75.3	73.0	77.1	70.0
Voter Registration						
Registration records	21.1%	33.3%	19.6%	20.1%	25.4%	10.0%
Voter mailing list	18.8	31.6	17.1	17.2	23.7	20.0
Vote counting	10.7	17.5	9.8	7.7	7.6	20.0
Registration deletion	18.8	29.8	17.4	17.5	23.7	10.0
Public Safety						
Uniform crime reporting	32.6%	28.1%	33.2%	24.6%	55.9%	60.0%
Other crime reporting	28.9	19.3	30.1	21.4	49.1	70.0
Traffic/parking violations	34.4	24.6	35.6	27.5	55.1	50.0
Traffic accidents	30.0	22.8	31.8	22.5	51.7	60.0
Treasury/Collection						
Property tax records & billing	36.6%	64.9%	33.0%	35.7%	38.1%	50.0%
Special assessment tax records	36.2	36.8	36.1	31.7	49.2	50.0
Business licenses	38.7	7.0	42.8	33.6	54.2	50.0
Payroll deductions	64.4	50.9	66.1	63.2	69.5	50.0
Utilities						
Water	72.3%	28.1%	78.0%	74.6%	66.1%	60.0%
Electrictiy	15.0	0	16.9	17.5	8.5	0
Sewerage	11.7	10.5	11.8	13.0	8.5	0
Purchasing/Inventory	29.4%	8.8%	32.1%	26.5%	38.1%	40.0%
Planning/Zoning	15.4%	8.8%	16.3%	10.8%	28.0%	40.0%
Sanitation	27.9%	8.8%	30.3%	26.5%	32.2%	30.0%

Data Processing

Plan Helps Automation In Virginia

By James D. Ham
Data Processing Manager
James City County, Virginia

When data processing services are operating relatively smoothly, why upset the apple cart? That's the question James City County, Virginia, officials asked before deciding to come up with a five-year plan for office automation. The answers proved most rewarding.

No particular problem led to the decision to create the plan. In fact, the county data processing office has successfully implemented software systems and increased the level of services provided to the county and the Williamsburg/James City Community School Board since introducing automated data processing in 1978. However, several unexpected hardware upgrades had been required since that time. Also, requests for automation services have been on the rise, especially in such non-financial areas as planning and police operations.

In order to meet these requests, the county needed to avoid unplanned or forced hardware upgrades. In expectation of increased workloads and more demands for automation, the county and school board created a joint data processing steering committee. The charge before the committee was fivefold:

- Approve long- and short-range data processing plans;
- recommend major acquisitions of data processing equipment;
- review data processing capital budget requests;
- determine priorities among major projects; and
- review methods for allocating costs among users.

As its first major activity, the committee formed a subcommittee to develop a long-range plan for automation. The plan was to project automation needs for a five-year period, and provide direction for satisfying those needs in an orderly, cost-effective manner.

The subcommittee consisted of the data processing manager, two persons

(Continued on page 48)

MUNICIPAL COST INDEXES

Compiled by Jeff Atkinson

THIS MONTH'S MARKETBASKET

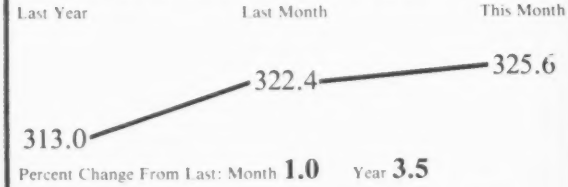
	Current Index	Percent Change From: Last Month	Last Year
Air Conditioners	143.3	0.1	5.8
Apparel	197.1	0.3	1.9
Asphalt Roofing	383.9	1.5	−2.2
Books	121.6	0.7	—
Chemicals, Industrial	338.8	−0.2	−3.1
Coal	535.5	0.3	−0.7
Concrete Products	302.2	0.3	1.3
Construction Machinery	352.7	0.1	1.8
Diesel Fuel	681.3	0.3	−14.3
Electric Lamps	313.2	0.9	9.8
Electric Power	425.1	1.3	2.4
Electric Components	185.2	2.3	5.3
Engines, I.C.	341.2	−0.1	2.9
Fans and Blowers	337.0	0	0.8
Fertilizers, Mixed	259.8	−0.2	−4.1
Floor Coverings	185.1	2.5	3.2
Footwear	249.9	0.4	1.1
Foundry Products	351.0	0.1	1.6
Fuel Oil No. 2	721.6	−0.7	−13.9
Furniture, Commercial	287.9	0.3	3.6
Gasoline	621.2	1.3	−10.6
Generator Sets	330.7	2.6	−4.0
Glass	229.8	0	1.6
Glass Containers	351.7	0	−1.6
Gypsum Products	276.0	0.9	8.7
Hardware	289.7	0.2	3.4
Heating Equipment	244.0	0.6	2.3
HVAC Controls	121.5	0.1	—
LP Gas	730.0	1.9	—
Lubricants	349.9	0.2	−0.4
Lumber	372.5	0.3	—
Metal Fabrications	302.2	0.1	−0.7
Millwork	296.1	0.5	5.7
Motor Vehicle Parts	352.8	0.1	2.4
Mowers	253.8	1.0	—
Natural Gas	1423.2	−1.5	3.5
Office Machines	154.6	0.2	1.5
Paint	265.6	0.2	—
Paper	281.7	0.8	−1.5
Passenger Cars	217.5	0	1.3
Plumbing Fixtures	292.1	0.5	6.3
Plywood	252.5	−0.4	23.2
Portland Cement	340.0	0.1	1.3
Pumps	347.7	0.1	0
Residual Fuel	1122.4	1.8	−10.2
Sand and Gravel	286.2	0	1.1
Sanitary Papers	358.6	−0.2	1.1
Soaps, Detergents	261.5	0	3.4
Sporting Goods	206.3	0	−1.4
Steel Mill Products	349.9	0.3	—
Struc. Clay Prod.	281.7	0.3	8.8
Switchgear	267.6	−0.1	2.8
Tires and Tubes	242.7	−0.5	−5.9
Transformers	224.1	0	−0.2
Trucks	313.5	0.2	3.9
Valves	99.9	−0.3	—
Wire and Cable	204.4	−0.5	—
Wiring Devices	336.1	−0.2	3.6

Despite stable commodity prices, the **Municipal Cost Index** rose a sharp 1 percent due largely to higher construction materials costs and an increase in the **Consumer Price Index.** However, recent rises in commodity prices have some analysts predicting that the U.S. inflation rate will rise for the remainder of this year and the first quarter of 1984. This could translate into higher overall costs to municipalities in 1984 than earlier anticipated.

Due to technical difficulties in acquiring the necessary statistical information, these **Indexes** did not appear in the past two issues of AMERICAN CITY & COUNTY.

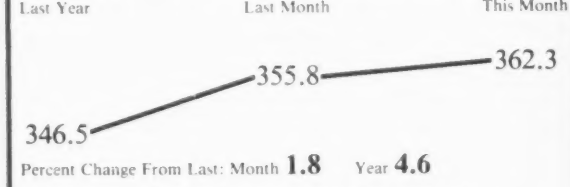
At-A-Glance Changes

ACC MUNICIPAL COST INDEX



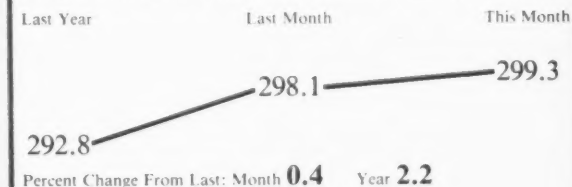
Percent Change From Last: Month **1.0** Year **3.5**

ACC CONSTRUCTION COST INDEX



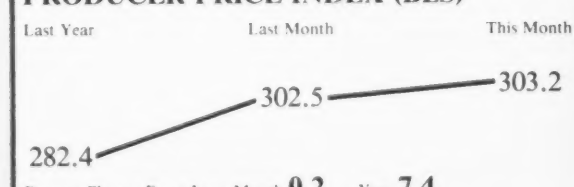
Percent Change From Last: Month **1.8** Year **4.6**

CONSUMER PRICE INDEX (BLS)



Percent Change From Last: Month **0.4** Year **2.2**

PRODUCER PRICE INDEX (BLS)



Percent Change From Last: Month **0.2** Year **7.4**

QUARTERLY MUNICIPAL TRENDS

	Current Level	Percent Change From: Last Qtr.	Last Year
Receipts	461.7B	2.4	7.8
Federal Grants	86.5B	0.8	1.6
Durable Purchases	14.2B	2.2	7.6
Consumables	31.2B	1.3	0
Services	325.4B	1.8	7.7
Structures	37.7B	−4.6	−7.6
Salaries, Wages	238.1B	1.8	7.7
Surplus	40.4B	22.8	40.1
Employment	12.855M	−0.7	−1.6